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EXAMINER
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KAU, STEVEN Y

ART UNIT	PAPER NUMBER
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2625

NOTIFICATION DATE	DELIVERY MODE
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07/18/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/660,323	<b>Applicant(s)</b> NELSON, TERRY M.	
	<b>Examiner</b> STEVEN KAU	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 April 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment was received on 4/24/2008, and has been entered and made of record. Currently, claims 1-19 and 21-32 are pending.

### ***Specification***

2. The corrected or substitute specification was received on 4/24/2008. The specification is acceptable. The disclosure objection is withdrawn from the record.

### ***Drawings***

3. The corrected or replacement drawing was received on 4/24/2008. The corrected drawing is acceptable and therefore the drawing objection is withdrawn from the record.

### ***Response to Remark/Arguments***

4. Applicant's arguments, section "The Office Action", page 9, with respect to claim 28 has been fully considered and are persuasive. The rejection of claim 28 under 35 U.S.C. § 112 Second Paragraph has been withdrawn.

Applicant's arguments, "claim 32 was rejected under 35 U.S.C. §101", Page 10, with respect to claim 32 has been fully considered and are not persuasive. With respect to claim 32, recites, "a location pattern arranged for use with a system comprising a pattern space having a plurality of dots each having a nominal position, the pattern having a plurality of dots, at least some of which having an asymmetric shape, having

Art Unit: 2625

no more than one axis of symmetry, the asymmetric shape causing the optical centre of gravity of those dots to be located substantially at the corresponding predetermined nominal position, wherein said location pattern is adapted for printing with human-discernible content on the same carrier", claims for a "location pattern". A "location pattern" can be used in a system or can be used for other purpose, i.e. printer calibration. However, a "location pattern" is not a "manufacture", or "process", or "machine", or "composite of matter", rather, it is a printed matter, and thus is classified as a non-statutory subject matter. Therefore, claim 35 rejection under 35 U.S.C. 101 still stands.

Applicant's arguments with respect to Claims 1-19 and 21-32 have been fully considered but are moot in view of the new ground(s) of rejection due to the amendments.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1, 29, 30 and 31 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The system components shown in Fig 3 are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

With respect to claim 1, recites, "a printer system comprising a printer adapted to print a location pattern comprising a plurality of dots, each having a substantially predetermined size and nominal position in the pattern, the printer having a resolution constraining the position at which the dots may be printed, the system being adapted to modify at least some of the dots prior to printing such that the optical centre of gravity of the modified dots more closely coincides with their nominal positions, wherein said system is adapted to print said location pattern and human-discernible content on the same carrier." Essential elements are missing in the instant claim to perform "to modify at least some of the dots prior to printing such that the optical centre of gravity of the modified dots more closely coincides with their nominal positions". For example, a workstation of Figure 3, a particular software module(s), a processor(s), a CPU(s), a database, and memory, etc. are the essential elements to perform "to modify at least some of the dots prior to printing such that the optical centre of gravity of the modified dots more closely coincides with their nominal positions".

With respect to claim 29, recites, "a printer system comprising a printer and adapted to print a location pattern comprising a plurality of dots, the system being arranged to introduce an asymmetry into the shape of at least some of dots prior to printing the pattern, wherein said system is adapted to print said location pattern and human-discernible content on the same carrier." Essential elements are missing in the claimed system for performing "to introduce an asymmetry into the shape of at least some of dots prior to printing the pattern". A printer in the system can print a pattern. However, without additional elements, how "a printer" or "said system" to perform "to

introduce an asymmetry into the shape of at least some of dots prior to printing the pattern”?

Claims 30 and 31 are rejected under 35 U.S.C. 112, first paragraph for the same reason discussed in this section.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, recites, "a printer system comprising a printer adapted to print a location pattern comprising a plurality of dots, each having a substantially predetermined size and nominal position in the pattern, the printer having a resolution constraining the position at which the dots may be printed, the system being adapted to modify at least some of the dots prior to printing such that the optical centre of gravity of the modified dots more closely coincides with their nominal positions, wherein said system is adapted to print said location pattern and human-discernible content on the same carrier." Essential elements are missing in the instant claim to perform "to modify at least some of the dots prior to printing such that the optical centre of gravity of the modified dots more closely coincides with their nominal positions", (emphasis added by the examiner). Applicant fails to particularly point out what level of "a resolution" being used to constrain a position and "may be printed" is indefinite description.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 2, 4, 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267) and further in view of Ericson (US 2002/0011989).

Regarding claim 1.

Wiebe discloses a printer system (**System 100 of Fig. 1, Par. 47**) comprising a printer adapted to print a location pattern comprising a plurality of dots (**Figs 2 and 3, Par. 48**), each having a substantially predetermined size (**dot sizes identified as 601, 602 & 603 of Fig. 6, Par. 60**) and nominal position in the pattern (**Figs 2 and 4, Par 50**), the printer having a resolution constraining the position at which the dots may be printed (**Wiebe discloses resolution constraint, i.e. large dot size in a pattern would have high resolution and the patterns could join together, Par 62**), wherein said system is adapted to print said location pattern (**Par. 13**).

Wiebe does not explicitly disclose the system being adapted to modify at least some of the dots prior to printing such that the optical centre of gravity of the modified

dots more closely coincides with their nominal positions, and human-discernible content on the same carrier.

Wang teaches Wang teaches modifying (**correcting**) at least some of the dots prior to printing such that the optical centre of gravity of the modified dots more closely coincides with their nominal positions (**e.g. intersection of grid lines; Fig. 3, col 5, lines 20 through col 6, line 25 and col 9, lines 19-47**).

Ericson teaches human-discernible content on the same carrier (**Fig 2a, Par 57, 58, 59 and 60**).

Having a printer system of Wiebe' 089 reference and then given the well-established teaching of Wang' 267 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the printer system of Wiebe' 089 reference to include the system being adapted to modify at least some of the dots prior to printing such that the optical centre of gravity of the modified dots more closely coincides with their nominal positions as taught by Wang' 267 reference since doing so the system in which dot overlap would be characterized by superimposing a virtual orthogonal grid or screen on the printed dots such that the center of each dot is coincident with the intersection between orthogonal lines of the grid or screen (col 2, lines 53-57, Wang); and then would have modified the combination of Wiebe and Wang's reference to include human-discernible content on the same carrier as taught by Ericson, since doing so a user would be able to adjust, or to interpret or to interact i.e. press the "send button" to send out the message on the digital page conveniently (Par.



11), and further the teachings of Wang' 267 and Ericson' 989 could be implement able for one another with predictable results.

Regarding claim 2.

Wiebe discloses arranged to modify some of the dots prior to printing by changing shape of those dots from a nominal shape (Paras 0016-0017 & Paras 0020-0026. "For a printout where a position-coding pattern's scale is adjusted in relation to an ideal pattern, the printer unit is preferably arranged also to adjust the scale of the printed-out information", a person of ordinary skill in the art understands that in order to print out an ideal pattern, dots must be adjusted from a nominal shape).

Regarding claim 4.

Wiebe discloses the modification substantially does not alter the size of the dots (Para 0062 and 0063).

Regarding claim 6.

Wiebe discloses wherein the nominal position of each dot of the pattern lies offset in one of a plurality of directions, such as above, below, to the left and to the right, from the intersection point of a virtual grid (Para 0050).

Regarding claim 14.

Wiebe discloses wherein the printer is a digital printer (Fig. 1, Para. 0047).

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267) and further in view of

Ericson (US 2002/0011989) as applied to claim 1, and further in view of Teremy et al (Teremy) (US 5,634,156).

Regarding claim 3.

Wiebe does not expressly teach that arranged to modify some of the dots prior to printing by introducing an asymmetry into the shape of those dots.

Teremy teaches that arranged to modify some of the dots prior to printing by introducing an asymmetry into the shape of those dots (col 6, lines 38 through col 7, line 12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include that arranged to modify some of the dots prior to printing by introducing an asymmetry into the shape of those dots taught by Teremy' 156 to determine the orientation of the pattern (col 6, lines 3-19).

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267), Ericson (US 2002/0011989), and further in view of Teremy et al (Teremy) (US 5,634,156) as applied to claim 3 above, and further in view of Iwata et al (Iwata) (US 4,955,736).

Regarding claim 5.

Wiebe differs from claim 5, in that he does not expressly teach wherein the modified dot shape is substantially an "L" shape or substantially a "T" shape.

Iwata teaches wherein the modified dot shape is substantially an "L" shape or substantially a "T" shape (Figs. 5A-F & 6A-F, col 6, lines 9-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include that the modified dot shape is substantially an "L" shape or substantially a "T" shape taught by Iwata to prevent the thin or broken printed portion from occurring in printing (col 3, lines 16-20).

13. Claims 7, 8, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267) and further in view of Ericson (US 2002/0011989) as applied to claim 6 above, and further in view of Amato (US 5,175,694).

Regarding claim 7.

Wiebe does not expressly teach wherein the modification of the dots has the effect of moving the optical centre of gravity of those dots in a first direction, towards or away from their nominal positions.

Amato teaches wherein the modification of the dots has the effect of moving the optical centre of gravity of those dots in a first direction (X-direction), towards or away from their nominal positions (Fig. 3, col 2, lines 46 through col 3, line 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified combination to include the modification of the dots has the effect of moving the optical centre of gravity of those dots in a first

direction, towards or away from their nominal positions taught by Amato for target tracking purpose (col 1, lines 52-53).

Regarding claim 8.

Wiebe does not expressly teach wherein the modification of the dots has the additional effect of moving the optical centre of gravity of those dots in a second direction, perpendicular to the first direction.

Amato teaches wherein the modification of the dots has the additional effect of moving the optical centre of gravity of those dots in a second direction (Y-Direction), perpendicular to the first direction (Fig. 3, col 2, lines 46 through col 3, line 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include the modification of the dots has the additional effect of moving the optical centre of gravity of those dots in a second direction, perpendicular to the first direction taught by Amato for target tracking purpose (col 1, lines 52-53).

Regarding claim 9.

Wiebe discloses wherein dots offset from intersection points of a virtual grid in a first direction have a different shape and/or size compared to dots offset from intersection points of a virtual grid in a second direction (Para. 0061).

Regarding claim 10.

Wiebe discloses wherein dots offset from intersection points of a virtual grid in a first direction have a different shape and/or size compared to dots offset from intersection points of a virtual grid in a second direction (Para 0048).

14. Claims 11, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267), Ericson (US 2002/0011989) and further in view of Amato (US 5,175,694) as applied to claim 10 above, and further in view of Yosefi (US 6,509,903).

Regarding claim 11.

Wiebe does not expressly teach wherein dots offset in the first direction are rotations of dots offset in the second direction.

Yosefi teaches wherein dots offset in the first direction are rotations of dots offset in the second direction (col 3, lines 66 through col 4, line 50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include wherein dots offset in the first direction are rotations of dots offset in the second direction taught by Yosefi to prevent jagged edges in printing (col 4, lines 10-15).

Regarding claim 12.

Wiebe does not expressly teach wherein dots offset in the first direction are reflections of dots offset in the second direction.

Wang teaches wherein dots offset in the first direction are reflections of dots offset in the second direction (Fig. 7, col 5, lines 41-52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include dots offset in the first

direction are reflections of dots offset in the second direction taught by Wang to simplify independent parameter calculations (col 6, lines 5-16).

Regarding claim 13.

Wiebe does not expressly teach wherein dots offset in the first direction are combined rotations and reflections of dots offset in the second direction.

Yosefi teaches wherein dots offset in the first direction are rotations of dots offset in the second direction (col 3, lines 66 through col 4, line 50); and

Wang teaches wherein dots offset in the first direction are reflections of dots offset in the second direction (Fig. 7, col 5, lines 41-52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to first include wherein dots offset in the first direction are rotations of dots offset in the second direction taught by Yosefi to prevent jagged edges in printing (col 4, lines 10-15, Yosefi), and then to have modified Wiebe to include wherein dots offset in the first direction are reflections of dots offset in the second direction taught by Wang to simplify independent parameter calculations (col 6, lines 5-16, Wang).

15. Claims 15, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267) and further in view of Ericson (US 2002/0011989) as applied to claim 14 above, and further in view of Rhoads et al (Rhoads) (US 7,054,463).

Regarding claim 15.

Wiebe does not expressly teach wherein the printer also functions as a photocopier.

Rhoads teaches wherein the printer also functions as a photocopier (col 4, lines 8-21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include the printer also functions as a photocopier taught by Rhoads to provide detecting and examining feature in the banking industry (col 4, lines 8-21).

Regarding claim 16.

Wiebe does not expressly teach wherein the printer is an inkjet printer, a LED printer, a LCD printers, or a liquid electrophotographic printers.

Rhoads teaches wherein the printer is an inkjet printer, a LED printer, a LCD printers, or a liquid electrophotographic printers (col 2, line 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include wherein the printer is an inkjet printer, a LED printer, a LCD printers, or a liquid electrophotographic printers taught by Rhoads because of the low printer cost (col 2, lines 1-2).

Regarding claim 17.

Wiebe does not expressly teach wherein the printer has a resolution approximately between 600 and 1200 dpi.

Rhoads teaches wherein the printer has a resolution approximately between 600 and 1200 dpi (col 2, lines 1-4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include wherein the printer has a resolution approximately between 600 and 1200 dpi taught by Rhoads because of the low printer cost (col 2, lines 1-2).

16. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Wang (US 5,469,267) and further in view of Ericson (US 2002/0011989) as applied to claim 1 above, and further in view of Murl (US 6,379,779).

Regarding claim 18.

Wiebe does not expressly teach wherein the dots are printed in IR absorbing ink.

Murl teaches wherein the dots are printed in IR absorbing ink (col 1, lines 40-53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include wherein the dots are printed in IR absorbing ink taught by Murl to provide security for document reproduction (col 1, lines 40-53).

Regarding claim 19.

Wiebe does not expressly teach that adapted to print the location pattern without human-discernible content.

Murl teaches that adapted to print the location pattern without human-discernible content (col 1, lines 40-53).



Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination to include that adapted to print the location pattern without human-discernible content taught by Murl to provide security for document reproduction (col 1, lines 40-53).

17. Claims 21-29 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Teremy et al (Teremy) (US 5,634,156), and further in view of Wang (US 5,469,267) and Ericson (US 2002/0011989).

Regarding claim 21.

Wiebe discloses a method of generating a location pattern comprising a plurality of dots (**Figs. 2 and 33**), comprising the steps of: determining the nominal position of the dots in a pattern area (**Fig. 3, Pars. 50 and 51**).

Wiebe differs from claim 21, in that he does not expressly teach that assigning an asymmetrical shape to at least some of the dots in the pattern area, in dependence upon the characteristics of given printer, such that when printed, the optical centre of gravity of those dots substantially coincides with the corresponding nominal positions, wherein said location pattern is adapted for printing with human-discernible content on the same carrier.

Teremy teaches that assigning an asymmetrical shape to at least some of the dots in the pattern area, in dependence upon the characteristics of given printer (**col 6, lines 38 through col 7, line 12**); and

Wang teaches that when printed, the optical centre of gravity of those dots substantially coincides with the corresponding nominal positions (**Figs. 2 & 3, col 5, lines 1 through col 6, line 25 and col 9, lines 19-47**); and

Ericson teaches wherein said location pattern is adapted for printing with human-discernible content on the same carrier (**Fig 2a, Par 57, 58, 59 and 60**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Wiebe to include assigning an asymmetrical shape to at least some of the dots in the pattern area, in dependence upon the characteristics of given printer taught by Teremy to determine the orientation of the pattern (col 6, lines 3-19, Teremy); then to have modified Wiebe and Teremy to include when printed, the optical centre of gravity of those dots substantially coincides with the corresponding nominal positions taught by Wang to position and orientating dot patterns with respect to intersection of two orthogonal grid lines (col 4, lines 15-27, Wang); and finally to have modified the combination of Wiebe, Teremy and Wang to include wherein said location pattern is adapted for printing with human-discernible content on the same carrier as taught by Ericson to allow user to interact or to interpret human-discernible content on the same carrier (Par. 11).

Regarding claim 22.

Wiebe discloses the step of requesting pattern information (Par 13).

Wiebe does not disclose a pattern database.

Ericson teaches a pattern database (Fig. 6, Par. 94).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Wiebe to include a pattern database taught by Ericson since doing so would make data transfer flexible and would be possible to use a single server to keep track of different owners of certain services (Par. 102).

Regarding claim 23.

Wiebe teaches determining characteristics of the printer; and, determining whether or not the assigning step is required (Para 0030).

Regarding claim 24.

Wiebe teaches the step of generating a print file of the pattern area (Paras 0009 and 0030).

Wiebe does not disclose at least some dots having the assigned asymmetrical shape.

Teremy teaches at least some dots having the assigned asymmetrical shape (col 6, lines 38 through col 7, line 12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Wiebe to include at least some dots having the assigned asymmetrical shape taught by Teremy to determine the orientation of the pattern (col 6, lines 3-19, Teremy).

Regarding claims 25, 26 and 27.

Wiebe teaches the step of printing the print file on the given printer (Para 0030), and the step of explicitly defining the shape of the at least some of the dots in the native resolution of the printer (Para 0016), wherein the shape of the at least some of the dots

is defined using any one of a bit map, a font set, or a high level programming language (Para 0012 & 0030).

Regarding claim 28.

Wiebe teaches a computer program (e.g. boundary information, Para 0013) or a printer driver comprising program code means for performing the method steps of claim 21 when the program is run on a computer and/or other processing means associated with suitable apparatus (Para 0013 and 0030).

Regarding claim 29.

Claim 29 recites identical features as claim 21, except claim 29 is a system claim. Thus, arguments similar to that presented above for claim 21 are also equally applicable to claim 29.

Regarding claim 31.

Wiebe discloses a printer system (Figs 1, 4 & 5) adapted to print a location pattern comprising a plurality of dots (Fig. 3), the dots having a first dimension lying between predetermined limits (Fig. 3, Para 0050).

Wiebe differs from claim 31, in that he does not expressly teach that each dot having an optical centre of gravity located at a predetermined nominal positions in the pattern, the system being adapted to modify the pattern prior to printing by introducing an asymmetry to the dot shape of selected dots, substantially without causing the first dimension to exceed its predetermined limits, such that when printed on a pre-selected printer the optical centre of gravity of the selected dots more closely coincides with their

corresponding nominal positions, wherein said system is adapted to print said location pattern and human-discernible content on the same carrier.

Wang teaches that each dot having an optical centre of gravity located at a predetermined nominal positions in the pattern (e.g. intersection of grid lines) (Fig. 3, col 5, lines 20 through col 6, line 25 and col 9, lines 19-47); and

Teremy teaches that the system being adapted to modify the pattern prior to printing by introducing an asymmetry to the dot shape of selected dots, substantially without causing the first dimension to exceed its predetermined limits, such that when printed on a pre-selected printer the optical centre of gravity of the selected dots more closely coincides with their corresponding nominal positions (col 6, lines 3 through col 7, line 12); and

Ericson teaches wherein said system is adapted to print said location pattern and human-discernible content on the same carrier (**Fig 2a, Par 57, 58, 59 and 60**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Wiebe to include that each dot having an optical centre of gravity located at a predetermined nominal positions in the pattern taught by Wang to position and orientating dot patterns with respect to intersection of two orthogonal grid lines (col 4, lines 15-27, Wang); then to have modified Wiebe and Wang to include assigning an asymmetrical shape to at least some of the dots in the pattern area, in dependence upon the characteristics of given printer taught by Teremy to determine the orientation of the pattern (col 6, lines 3-19, Teremy); and finally to have modified the combination of Wiebe, Teremy and Wang to include wherein said location

pattern is adapted for printing with human-discernible content on the same carrier as taught by Ericson to allow user to interact or to interpret human-discernible content on the same carrier (Par. 11).

Regarding claim 32.

Claim 32 recites identical features as claim 31, except claim 32 is a location pattern claim. Thus, arguments similar to that presented above for claim 31 are also equally applicable to claim 32.

18. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiebe et al (Wiebe) (US 2002/0159089) in view of Ericson (US 2002/0011989).

Regarding claim 30.

Wiebe discloses a printer system (**Figs. 1, 4, & 5**) adapted to print a location pattern comprising a plurality of dots each offset from a nominal position in one of a plurality of directions (**dots above, below, to the left and to the right of the corresponding raster position, Fig. 3, and par. 50**), the system being arranged to modify the degree of offset of each dot from its nominal position by modifying the shape of each dot (**Fig. 5, Paras 0053 & 0057, “calculates mathematically the appearance of the pattern based on the boundary information”, a person of ordinary skill in the art understands that modifying the degree of offset of each dot from its nominal position can be done by calculating the appearance of the pattern based on the boundary information**), and wherein said system is adapted to print a said location pattern (**Par. 13**).

Art Unit: 2625

Wiebe does not disclose human-discernible content on the same carrier.

Ericson teaches human-discernible content on the same carrier (**Fig 2a, Par 57, 58, 59 and 60**).

Having a printer system of Wiebe' 089 reference and then given the well-established teaching of Wang' 267 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the printer system of Wiebe' 089 reference to include human-discernible content on the same carrier as taught by Ericson' 989, since doing so a user would be able to adjust, or to interpret or to interact i.e. press the "send button" to send out the message on the digital page conveniently (Par. 11), and further the Ericson' 989 could be implement able for one another with predictable results.

***Conclusion***

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Kau whose telephone number is 571-270-1120 and fax number is 571-270-2120. The examiner can normally be reached on M-F, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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